

# **DART SERVICE INSTRUCTION**

**TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-762 REV. E AND EARLIER AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-762 REV. 4 AND EARLIER**

**REF. FAA STC: SR01853SE  
REF. TCCA: LOA RDIMS-4374899  
REF. EASA STC: 10017063  
REF. DGAC MEXICO STC: IA-376/2016**

## **1.0 PURPOSE**

It has come to Dart's attention that the D117-762-041 and D145-762-045 Skidtubes at CHG 002 and prior, and D145-762-043 Skidtubes at CHG 005 and prior, may experience hole elongation around the ground handling lugs when certain styles of ground handling equipment (particularly the ground handling equipment with wheels positioned aft of the rear ground handling lug) are used to tow the aircraft over rough terrain.

The purpose of this Dart Service Instruction (DSI) is to provide customers with a repair procedure to modify their existing skidtubes to prevent elongation and/or to restore skidtubes with elongated ground handling holes.

Skidtubes that are acceptable candidates for this repair procedure must have a maximum ground handling hole elongation of 1.05" (26.7 mm) once the hole is cleaned up and deburred. Skidtubes that have a ground handling hole elongation greater than 1.05" (26.7 mm) must be removed from service and replaced. Reference Figure 1 of this service instruction.

## **2.0 INSTALLATION PROCEDURE**

**NOTE:** The skidtube is manufactured with an internal vertical I-beam and great care must be taken not to damage it during installation of the D5514-1 Doublers (hereinafter referred to as doubler(s)).

**NOTE:** D117-762-045 Float Skidtubes may have been modified to include the installation of hose support brackets. If the location of the hose support brackets interfere with the installation of the doubler it is acceptable to relocate the hose support brackets more forward or more aft on the skidtube. Do not reposition the hose support bracket higher on the skidtube as this will result in damage to the internal I-beam. Plug existing holes with the same part number of rivets that were removed.

**NOTE:** Mark the location and orientation of each doubler when transfer drilling and ensure that the doublers are positioned in the same manner when fastening the doublers to the skidtube. Use the forward ground handling lug hole (if it is still fully intact and undamaged) to assist with correctly placing the doublers.

2.1 To facilitate this modification, remove the skidtube from the aircraft per ICA-D117-762 Chapter 32.1 / 32.7 / 32.9.

2.2 Remove and discard both ground handling lugs and associated hardware from the skidtube.

2.3 Remove the crossbolt spacers only if they are loose.

2.4 Deburr all holes and ensure that the outer surface of the skidtube is uniform and smooth. Do not remove any more material than necessary around the hole.

2.5 Ensure that the doubler is properly positioned on the skidtube. Test fit the doubler and D5517-1 Ground Handling Pins (hereinafter referred to as pin(s)). Reference Figure 2 of this service instruction.

2.6 Transfer mark Qty (38) holes from each doubler to the skidtube and ensure there is a minimum edge distance of 0.241" (6.1mm) between the edge of the elongated hole and the center of the transfer mark. Reference Figure 3 of this service instruction.

2.7 Drill Qty (38) Ø0.161" (#20) holes at each transfer mark location into the skidtube. Deburr all holes.

2.8 Touch up all bare aluminum on the skidtube with a chemical conversion coating per MIL-DTL-5541. (Alodine 1201)

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	REV.	DESCRIPTION	BY	DATE
	DESIGN	ML	<b>DART AEROSPACE USA, INC</b>	
	DRAWN	ML	EUGENE, OR	
	CHECKED	NO	DRAWING NO.	REV. A
	MFG. APPR.	N/A	<b>DSI 9775</b>	SHEET 1 OF 4
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	<b>SKIDTUBE DOUBLER</b>	NTS
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- 2.9 Apply a 0.010" (0.3mm) thick layer of Proseal 890 B1/2 or Proseal 1422 B1/2 to the inner surface of one doubler.
- 2.10 Using cleco clamps, secure the doubler onto one side of the skidtube.
- 2.11 Liberally coat the shoulder on one end of each pin with Proseal 890 B1/2 or Proseal 1422 B1/2 and insert that end through the skidtube into the doubler.
- 2.12 Liberally coat the shoulder on the other end of the pins with Proseal 890 B1/2 or Proseal 1422 B1/2.
- 2.13 Apply a 0.010" (0.3mm) thick layer of Proseal 890 B1/2 or Proseal 1422 B1/2 to the inner surface of the second doubler.
- 2.14 Using cleco clamps, secure the second doubler onto the other side of the skidtube.
- 2.15 Ensure that both doublers are flush against the surface of the skidtube.
- 2.16 Ensure that the doublers and pins remain properly aligned per Figure 2 of this service instruction.
- 2.17 Using CR3524-5-3 Rivets, secure both doublers to the skidtube. Reference Figure 3 of this service instruction
- 2.18 Remove all excess Proseal.
- 2.19 Relocate the float hose support brackets if necessary.
- 2.20 Reinstall the modified skidtube onto the aircraft per ICA-D117-762 Chapter 32.2 / 32.8 / 32.10.
- 2.21 Repeat steps 2.1 thru 2.20 on the other skidtube.
- 2.22 Update the aircraft log book as applicable to indicate installation of the DSI 9775-011 Skidtube Doubler Kit.

### 3.0 PARTS LIST

The DSI 9775-011 Skidtube Doubler Kit contains the parts required to modify Qty (2) skidtubes.

\*Qty (8) additional rivets are provided with the kit.

Qty -011	Part Number	Description
X	DSI 9775-011	SKIDTUBE DOUBLER
4	D5514-1	DOUBLER
4	D5517-1	GROUND HANDLING PIN
*160	CR3524-5-3	RIVET, COUNTERSUNK

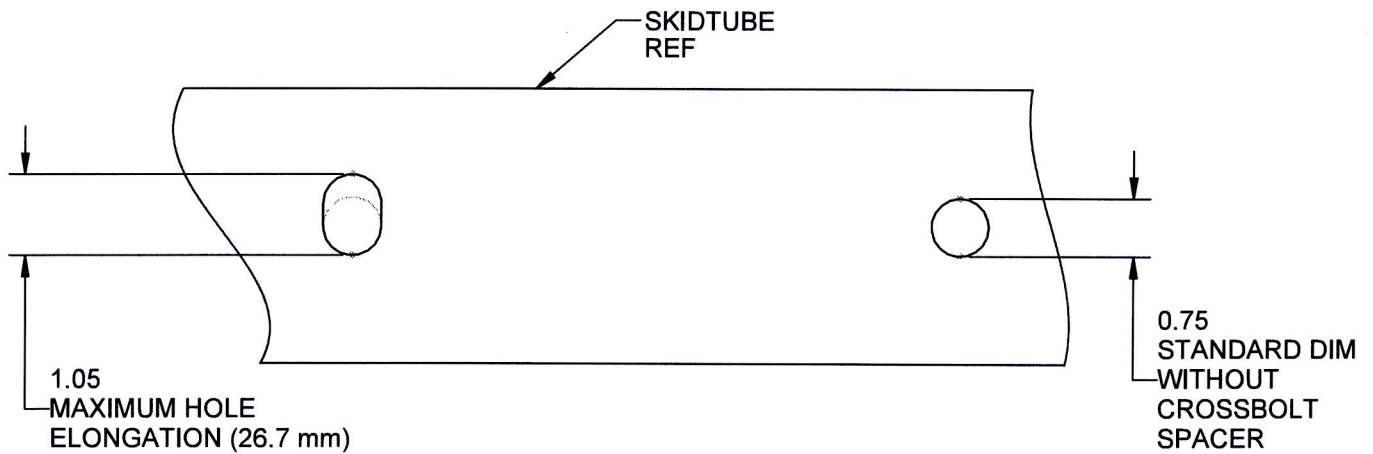
### 4.0 WEIGHT AND BALANCE

When the DSI 9775-011 Skidtube Doubler Kit is installed on both skidtubes, there is a net weight increase as stated in the following table.

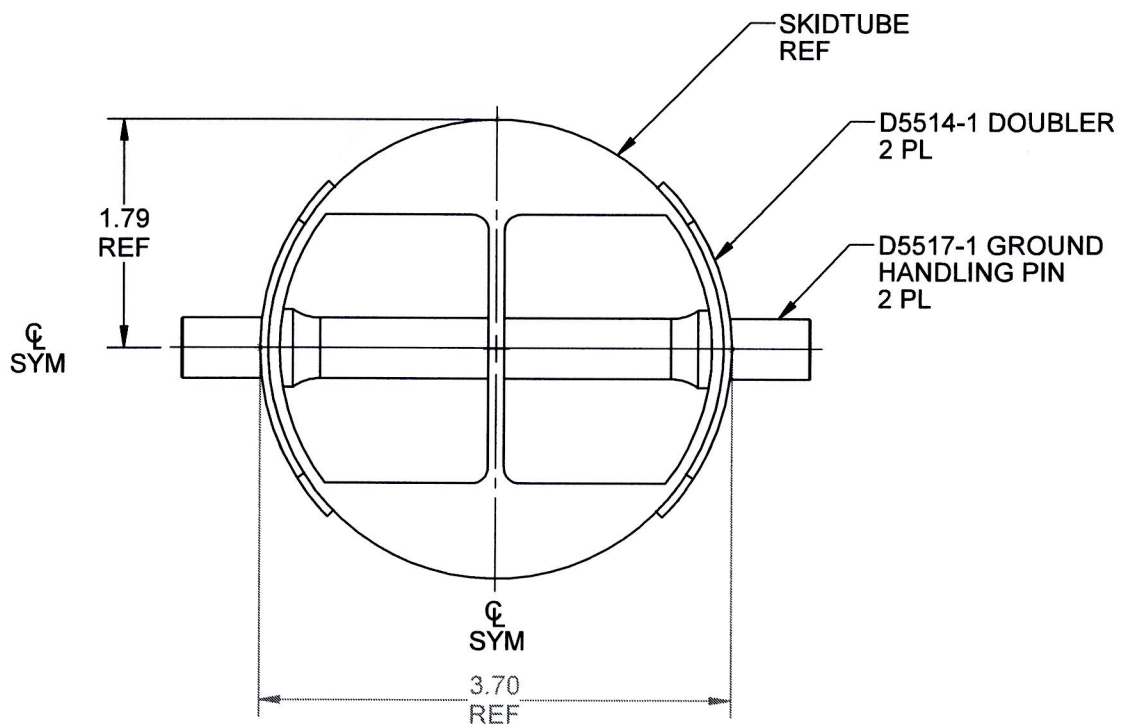
Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
DSI 9775-011 SKIDTUBE DOUBLER KIT	2.2 lb 1.0 kg	0 in 0 m	0 in-lb 0 m-kg	180 in 4.6 m	396 in-lb 4.6 m-kg

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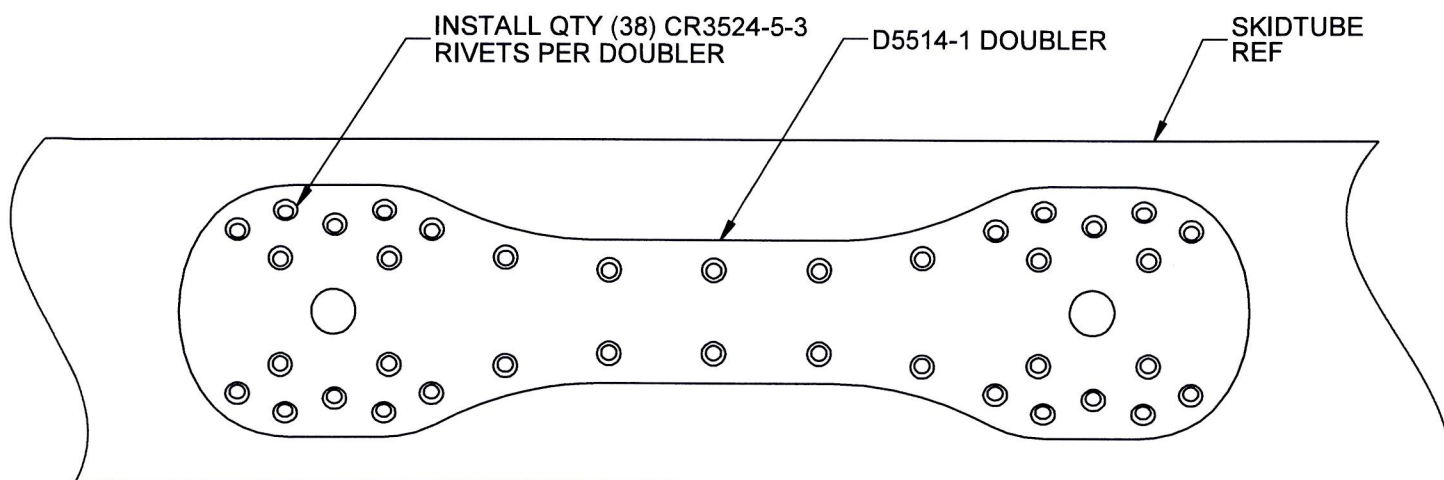
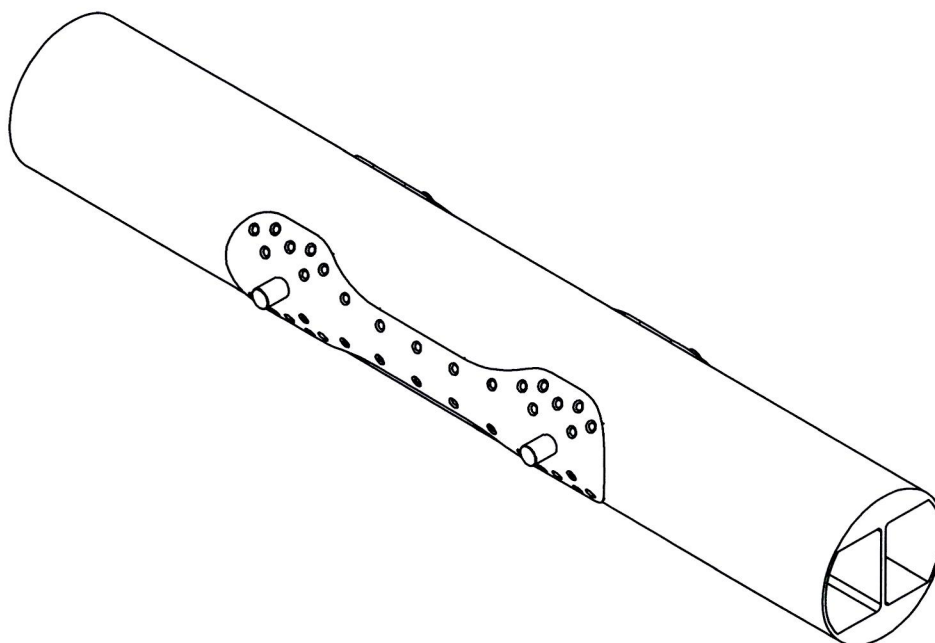
**FIGURE 1**  
HOLE ELONGATION



**FIGURE 2**  
DOUBLER INSTALLATION  
(SHOWN WITH CROSSBOLT SPACER REMOVED)

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**FIGURE 3**  
RIVET INSTALLATION

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